

CHEMISTRY >> Chemical Bonding

Q 1

The bond formed b/w NH_3 and BF_3 is co-ordinate bond because NH_3 _____ due to presence of one lone pair

A

acceptor

B

donor

C

neutral

D

negatively charged

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Q 2 The elements having partially filled d and f orbitals are called as _____?

A Transition elements

B d-Block elements

C f-block elements

D All of these

Q 2 The elements having partially filled d and f orbitals are called as _____?

A Transition elements

B d-Block elements

C f-block elements

D All of these

Q 3

Equilibrium constant for Ideal gases in terms of partial pressure is denoted by

A

K_c

B

K

C

K_p

D

None of these

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Q 4

Reduction of ethanoic acid with LiAlH_4 produces _____?

A

Propanol

B

Ethanal

C

Ethanol

D

Ethane

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Q 5

The e/m value is maximum for _____ gas because of _____ value of " m " for positive rays obtained from it.

A

Oxygen gas, lowest

B

hydrogen gas, highest

C

hydrogen gas ,lowest

D

helium gas ,highest

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Q 6 If Water is present on a cup placed on a table, what will be the system in this case?

A Water

B Water in cup

C Whole table

D All of these

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Q 7

What is the order of S_N2 reactions?

A

1st order

B

zero order

C

2nd order

D

3rd order

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Q 8

Angles in a Unit Cell are denoted by

A

x, y, z

B

a, b, c

C

α, β, γ

D

i, j, k

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Q 9

The compounds in which similar groups are present on the same side of double bond are called as ____?

A

Trans isomers

B

Positional isomers

C

Cis isomer

D

None of these

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Q 10

Which of the uranium isotope have larger mass.

A

6.22×10^{23} atoms of U - 235

B

6.22×10^{23} atoms of U - 238

C

6.22×10^{23} atoms of U - 234

D

all of these

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Q 11

Salt Bridge is used for the purpose of

A

Producing Electrons

B

Circuit Completion

C

Increasing speed of electrons

D

All of these

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Q 12 Which of the following is true about the kinetics of bimolecular elimination reactions?

A 1st order reaction

B 2nd order reaction

C Zero order reaction

D 3rd order reaction

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Q 13

In nature fatty acids occur as _____ of glycerol?

A

Acid halides

B

Binary compounds

C

Esters

D

Alkanes

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Q 14

Voltaic Cell can be converted into a Reverse galvanic Cell by

A

Changing positions of electrodes

B

Replacing Salt Bridge with a Wire

C

Providing an External Source of electricity

D

All of these

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Q 15

80% of the coal is used in_____?

A

lime kiln

B

Domestic purposes

C

Fuel

D

Motor bikes

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Q 16

Which phenol is most acidic in nature

A salicylic acid

B picric acid

C cresol

D O - nitrophenol

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Q 17 soap and detergents show cleansing action because of the presence of __ of molecules

A opposite poles

B polar part

C non polar part

D positive end

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Q 18

To avoid long reaction time and to get equilibrium mixture quickly we add

A

More reactants

B

catalyst

C

inhibitors

D

enzymes

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Q 19

Protein component of enzyme is called_____.

A

Coenzyme

B

Cofactor

C

Apo-enzyme

D

Prosthetic group

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Q 20

Ethane is obtained by electrolyzing _____

A

Potassium formate

B

Potassium succinate

C

Potassium acetate

D

Potassium fumarate

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Q 21

Who attributed the deviation of real gases from ideal behavior

A

Boyle's law

B

Charles's law

C

Avogadro's law

D

Van der Waals

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Q 22

A _____ is the force, which holds together two or more atoms or ions to form a large variety of compounds

A

Ionic bond

B

chemical bond

C

covalent bond

D

metallic bond

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Q 23

Which of the following test is not given by Aldehyde ?

A

Benedict test

B

Tollen's test

C

Nitroprusside test

D

Fehling's test

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Q 24

Catalytic activity of enzyme is enhanced by:

A

Activator

B

Coenzyme

C

Co-factor

D

Both A and B

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Q 25

The forces of attraction in Molecular solids

A

Strong

B

Very Strong

C

Weak

D

Moderate

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Q 26

Which of the following is a Unsaturated fatty acid?

A

Palmitic acid

B

Stearic acid

C

Oleic acid

D

Ethanoic acid

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Q 27

The general name of ore $\text{CaSO}_4 \cdot \text{H}_2\text{O}$ is

A

Gypsum

B

Dolomite

C

Calcite

D

Plaster of Paris

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Q 28

The energy is __when oppositely charged ions brought close to each other

A

released

B

absorbed

C

remain same

D

constant

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Q 29

With the passage of time rate of reaction always

A

Increases

B

Remains constant

C

Decreases

D

Increases exponentially

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Q 30

Electrolysis of a dilute solution of NaCl results at the anode

A

Sodium

B

Hydrogen

C

Chlorine

D

Oxygen

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Q 31

For 3rd order reactions the half-life is

A

inversely proportional to square of concentration

B

directly proportional to cube of concentration

C

inversely proportional to concentration

D

directly proportional to concentration

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Q 32

The formation of negative ion is a/an ____ process

A

exothermic

B

endothermic

C

both A & B

D

none of these

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Q 33

If at equilibrium state temperature is increased, it will favor

A

Exothermic Reactions

B

Endothermic Reactions

C

Reversible gaseous reactions

D

Irreversible reactions

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Q 34

Energy is __ when an electron is added to the isolated gaseous atom

A

increased

B

released

C

decreased

D

absorbed

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Q 35

For the reaction; $\frac{1}{2} \text{H}_2 \rightarrow \text{H}$, the change in enthalpy is called as _____?

A

Enthalpy of formation

B

Enthalpy of neutralization

C

Enthalpy of atomization

D

Enthalpy of Reaction

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Q 36

Bisulfite addition product when heated with mineral acid yield?

A

Carboxylic acid

B

Alpha hydroxy acid

C

Starting material from which it is formed

D

Alpha beta unsaturated compound

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Q 37

Which of the following is a strong acid?

A

Ethane

B

Ethyl Chloride

C

Ethanol

D

Phenol

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Q 38

In CCl_4 , all C-Cl bonds are _____ but molecule is ___ overall

A

polar, nonpolar

B

nonpolar, neutral

C

polar, Neutral

D

neutral, on polar

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Q 39

OH-is added when reaction is in

A

Acidic Medium

B

Basic Medium

C

Neutral solution

D

All of these

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Q 40

At high altitudes, the pilots feel uncomfortable breathing because the partial pressure of oxygen is lower than

A

16 torr

B

159 torr

C

158 torr

D

157 torr

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Q 41

Falling water of a waterfall is an example of

A

Reversible Reaction

B

Spontaneous Reactions

C

Endothermic Reactions

D

All of these

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Q 42

The concept of atoms was given by _____

A

Democritus

B

Berzelius

C

Bohr

D

Dalton

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Q 43

London force of interaction forms crystals

A

covalent crystals

B

ionic crystals

C

molecular crystals

D

metallic crystals

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Q 44

The slope determined by drawing a right angled triangle drawn with tangent as hypotenuse will be same

A

with different sizes of triangles drawn

B

at different point on curve

C

at the start and end of curve

D

All of these

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Q 45

2 moles of octane (C_8H_{18}) burns with 25 moles of oxygen (O_2) and produced _____ moles of carbon dioxide along with 18 moles of water

A

14

B

16

C

18

D

2

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Q 46

In some cases during atomic orbital hybridization, ground state electrons promoted to excited states , as a result __ increases

A

number of shells

B

number of electrons

C

number of unpaired electrons

D

number of bonds

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Q 47

Which one of the following is the correct value for the enthalpy of formation of CO?

A

-110kJ/mol

B

-210kJ/mol

C

-111kJ/mol

D

None of these

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Q 48

Which gas among them shows maximum ideal behavior

A

Ammonia

B

Hydrogen

C

Helium

D

Radon

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Q 49

Non-typical transition elements belong to?

A

2B

B

3B

C

221B

D

1B

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Q 50

Electrolysis is a

A

Spontaneous Reactions

B

Oxidation-reduction reaction

C

Reduction Reaction

D

Oxidation Reaction

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Q 51

Which of the following catalyst is used in the industrial preparation of methanol?

A

Zinc oxide and alumina

B

Alumina and silica

C

Silica and Chromium oxide

D

Zinc oxide and Chromium oxide

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Q 52

If in a solution of alkyl halide in a nonpolar solvent, base is added which of the following reaction takes place?

A

$\text{S}_{\text{N}}2$

B

E_1

C

$\text{S}_{\text{N}}1$

D

E_2

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Q 53

LDH-1 is raised in which disease:

A

Rickets

B

Anemia

C

Heart disorders

D

Stroke

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Q 54

Glacial acetic acid is_____?

A

Pure liquid acetic acid at 17°C

B

Pure solid acetic acid at 17°C

C

Pure solid acetic acid at 118°C

D

Pure solid acetic acid at -20 °C

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Q 55

What is the correct relation between ΔH and intermolecular forces ?

A

Higher ΔH weaker intermolecular forces

B

Higher ΔH , higher intermolecular forces

C

Lower ΔH , higher intermolecular forces

D

None of these

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Q 56

The electrical conductivity of metal sometimes decreases with the

A

increase in pressure

B

increase in temperature

C

decrease in temperature

D

decrease in pressure

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Q 57

Wave nature of He atom is similar to

A

alpha rays

B

beta rays

C

gamma rays

D

x-rays

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Q 58

A star moving away from earth shows:....

A

green shift

B

red shift

C

blue shift

D

none of these

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Q 59

Oscillatory or vibratory motion can be defined as:

A

upward motion from mean position

B

right hand motion of the pendulum

C

to and fro motion about the mean position

D

random movement of gas particles

58

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Q 60

The efficiency of diesel engine is:....

A

10% to 20%

B

20% to 35%

C

35% to 40%

D

40% to 50%

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Q 61 A body is travelling in a circle of radius r at a speed v . Its centripetal acceleration will be:

A $a = r^2 / v$

B $a = r / v$

C $a = v^2 / r$

D $a = v / r$

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Q 62

The principle behind the working of cathode ray oscilloscope is

A

oscillation

B

half wave rectification

C

full wave rectification

D

none of these

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Q 63

Kilowatt-hour(kWh) is a unit of?

A

Power

B

Energy

C

current

D

resistance

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Q 64

The process by which a heavy nucleus splits up into lighter nuclei is known as

A

fission

B

fusion

C

alpha-decay

D

a chain reaction

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Q 65

If an object moves with constant velocity then its acceleration is

A

zero

B

nonzero

C

infinite

D

none of these

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Q 66

The electric potential at infinite distance is:....

A

infinity

B

zero

C

positive

D

negative

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Q 67 Which of the following types of force can do no work on the particle upon which it acts

A frictional force

B gravitational force

C centripetal force

D elastic force

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Q 68

The current passing through a conductor is directly proportional to the potential difference applied across its terminals, provided the temperature and other physical conditions of the conductor does not change

A

Gauss's law

B

Lenz law

C

Pascal's law

D

Ohm's law

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Q 69

The radius of atom is of the order of

A

10^{10} m

B

10^{-10} m

C

10^{-14} m

D

10^{14} m

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Q 70

First law of thermodynamics is a special case of

A

Newton's law

B

Charles's law

C

Conservation of energy

D

Conservation of entropy

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Q 71

The length of a conductor is halved. Its resistance will be :

A

halved

B

doubled

C

unchanged

D

quadrupled

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Q 72

Non-inductive resistances are used in

A

ammeter

B

voltmeter

C

resistance boxes

D

all of these

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Q 73

Work done by a conservative force in a complete cycle is

A

Zero

B

more than zero

C

less than zero

D

none of these

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Q 74

Numbers of photon electrons emitted from metal depends upon :

A

Intensity of incident light

B

Energy of incident light

C

Wavelength of incident light

D

Frequency of incident light

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Q 75

If the conductor resistance is 50 ohm and the current passing through it is 5 A. What is the value of potential difference?

A

150V

B

250V

C

50V

D

15V

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Q 76

What is the radius of circular path, if particle has mass m and charge q

A

$$r = qb/m$$

B

$$r = mv/B$$

C

$$r = mv/qB$$

D

$$r = mvr/qB$$

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Q 77

$F = e(v \times B)$ is valid for

A

electron

B

proton

C

neutron

D

all

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Q 78

Coherent source of light means

A

multiple wavelength

B

double wavelength

C

single wavelength

D

coherent photons

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Q 79

Number of atoms decaying in a particular period is _____ to number of atoms present in the beginning of the period

A

directly proportional

B

inversely proportional

C

equal

D

independent

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Q 80

Two copper conductors have equal length. The cross-sectional area of one conductor is four times that of the other. If the conductor having smaller cross-sectional area has a resistance of 40 ohms the resistance of other conductor will be

A 160 ohm

B 80 ohm

C 20 ohm

D 10 ohm

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Q 81

Which is not the result of special theory of relativity

A

Length contraction

B

Space - time transformation

C

Time dilation

D

Mass variation

80

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Q 82

A half wave rectifier is equivalent to

A

Clamper

B

Clipper

C

Clamper circuit with negative bias

D

Clamper circuit with positive bias

81

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Q 83

Calculate the energy of a photon of wavelength 6600 angstroms.

A

$0.3 \times 10^{-19} \text{ J}$

B

$3 \times 10^{-19} \text{ J}$

C

$30 \times 10^{-19} \text{ J}$

D

$300 \times 10^{-19} \text{ J}$

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Q 84

A 1.0 kW heater supplies energy to a liquid of mass 1 kg. The temperature of the liquid changes by 80 K in a time of 400 s. The specific heat capacity of the liquid is $4.0 \text{ kJ / kg}^\circ\text{K}$. What is the average power lost by the liquid?

A 100

B 200

C 400

D 800

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Q 85

Faraday's law explains how electric field will interact with

A

electric field

B

magnetic field

C

battery

D

none of these

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Q 86

You have two identical capacitors. They can be connected in series or in parallel. If you want the smallest equivalent capacitance for the combination, how should you connect them?

A

in parallel

B

in series

C

either way because both combinations have the same capacitance

D

we can not determine, because presence of resistance in the circuit determines capacitance

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Q 87

Projectile motion has _____ acceleration at each point of trajectory

A

variable

B

constant

C

zero

D

none of these

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Q 88

Ripple factor of full wave rectifier is

A

1.21

B

0.6

C

0.482

D

0.9

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Q 89

When no heat enters or leaves the system, it is called:...

A

isothermal

B

adiabatic

C

isovolumetric

D

isobaric

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Q 90

One radian equals to _____ degree

A

30

B

60

C

90

D

none of these

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Q 91

Michelson measured the length of standard metre in terms of the wavelength of:

A

green cadmium light

B

violet cadmium light

C

red cadmium light

D

blue cadmium light

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Q 92 A radioactive source has a half-life of 80 s. How long will it take for $\frac{7}{8}$ of the source to decay?

A 10s

B 70s

C 240s

D 640s

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Q 93

If f_1 and f_2 are frequencies of two tuning forks, such that $f_1 < f_2$, then number of beats produced in one second are:

A $f_2 - f_1$

B $f_2 * f_1$

C $f_1 - f_2$

D $f_2 + f_1$

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Q 94

The maximum instantaneous value measured from zero value is known as?

A

peak value

B

peak to peak value

C

cycle

D

period

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Q 95

A longitudinal wave is moving through a medium. Which of the following statements about direction of propagation of wave and displacement of the medium is true?

A

displacement of medium = parallel to the energy transfer direction of propagation of wave = parallel to the energy transfer

B

displacement of medium = parallel to the energy transfer direction of propagation of wave = perpendicular to the energy transfer

C

displacement of medium = perpendicular to the energy transfer direction of propagation of wave = parallel to the energy transfer

D

displacement of medium = perpendicular to the energy transfer direction of propagation of wave = perpendicular to the energy transfer

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Q 95

A longitudinal wave is moving through a medium. Which of the following statements about direction of propagation of wave and displacement of the medium is true?

A

displacement of medium = parallel to the energy transfer direction of propagation of wave = parallel to the energy transfer

B

displacement of medium = parallel to the energy transfer direction of propagation of wave = perpendicular to the energy transfer

C

displacement of medium = perpendicular to the energy transfer direction of propagation of wave = parallel to the energy transfer

D

displacement of medium = perpendicular to the energy transfer direction of propagation of wave = perpendicular to the energy transfer

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Q 96

Consider a peak rectifier fed by a 60-Hz sinusoid having a peak value $V_p = 100$ V. Let the load resistance $R = 10$ k Ω . Calculate the fraction of the cycle during which the diode is conducting

A 1.06 %

B 2.06%

C 3.18 %

D 4.82%

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Q 97

For an unknown element X the wavelength recorded is 2.9×10^{-2} m, the half life of element is ____ years

A

50

B

100

C

1000

D

none of these

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Q 98 Electron and proton both with same momentum enter perpendicularly in uniform field

- A path of proton will be more curved
- B path of electron will be more curved
- C both have same curved path
- D path of both will straight line

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Q 99

Acceleration of a moving car when brakes are applied is

A

negative

B

zero

C

positive

D

infinite

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Q 100

Consider a car is travelling for one hour. Which of the following cases has the greatest average velocity in east-direction?

- A car travels 20 km due east
- B car travels 60 km due east, then turns around and travels 40 km due west
- C car travels 70 km due east
- D car travels 30 km due west, then turns around and travels 30 km due east

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Q 101

The angular acceleration has units

A

rad/sec

B

sec/rad

C

sec²

D

none of these

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Q 102

Which rays are lasers?

A

x-rays

B

beta rays

C

gamma rays

D

coherent photons

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Q 103

A stationary wave is setup on a string of length 10 cm. Four loops are formed. what is the distance between two consecutive crests?

A 4.5 cm

B 5 cm

C 2.5 cm

D 1.25 cm

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Q 104

A stationary wave is formed in a pipe which is open at one end. If length of pipe is L , then what is the maximum possible wavelength of the wave.?

A

L

B

$2L$

C

$3L$

D

$4L$

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Q 105 A force $F = 7 - 2x + 3x^2$ is applied on 2 kg body, work done to displace the body from $x = 0$ to $x = 5$ m

A 70 J

B 270 J

C 35 J

D 135 J

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Q 106

The reason that white light is not harmful radiation is that

A

its speed is less than other radiations

B

it is composed of different lights

C

it is originated from non radioactive element

D

none of these

105

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Q 107

A sample of F-18 is used internally as a medical diagnostic tool to look for the effect of the positron decay ($T_{1/2} = 110 \text{ min}$). How long does it take for 99 % of the F-18 to decay?

A 10.2 h

B 11.2 h

C 14.2 h

D 12.2 h

106

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Q 108

Which of the following remains unchanged in transformer

A

Voltage

B

current

C

Power

D

Capacitance

107

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Q 109 What is the internal energy change in system that has absorbed 800J of heat and work done is 500J?

A 200J

B 550J

C 600J

D 300J

108

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Q 110

Find the resistance if voltage of the circuit is 45 volts and current 30 Amp?

A

1.6 ohm

B

1.5 ohm

C

1.7 ohm

D

1.8 ohm

109

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Q 111

A half wave rectifier is operating from 50 Hz mains. Fundamental frequency of ripple will be

A

100 Hz

B

25 Hz

C

200Hz

D

50Hz

110

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Q 112

Which of the following statements is incorrect about the photons

A

Momentum of photon h/λ

B

Rest mass of photon is zero

C

photon exert no pressure

D

Energy of photon is $h\nu$

111

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Q 113

The alternative forms of same gene is called which of the following?

A

locus

B

gene

C

allele

D

phenotype

112

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Q 114

If more oxygen is present, the rubisco starts:

A

Respiration

B

Photorespiration

C

Carboxylase

D

None of these

113

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Q 115

As long as two species occupy different niches, there is?

A

competition

B

no competition

C

gene linkage

D

polymorphism

114

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Q 116

Chlorophylls are found embedded in the _____ membranes?

A

Stroma

B

Grana

C

Thylakoid

D

Intergrana

115

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Q 117

Which of the following is true of actin and myosin filaments?

A Troponin, calcium, and tropomyosin interact with the thick filament

B actin molecules are classified as thin filaments, whereas myosin molecules are classified as thick filaments

C both a and b

D none of these

116

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Q 118

What is the function of the fluid secreted by sertoli cells?

A

provides liquid medium

B

Provides protection to sperms

C

Provides nourishment to sperms

D

All A,B and C are correct

117

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Q 119

Mating between relatives is called which of the following?

A

ex breeding

B

breeding

C

inbreeding

D

outbreeding

118

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Q 120

The darker, outer portion of the brain is called:

A

White matter

B

Gray matter

C

Reflex arc

D

Medulla

119

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Q 121

Function of Smooth Endoplasmic Reticulum (SER) is _____ .

A Synthesis of intracellular proteins.

B Synthesis of extracellular proteins.

C Synthesis of extracellular enzymes.

D Synthesis of lipids.

120

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Q 122

A structural component that is found in all viruses is?

A

envelope

B

DNA

C

Capsid

D

Tail Fibers

121

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Q 123

Icosahedral Viruses have how many faces?

A

20

B

30

C

10

D

40

122

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Q 124

Microbiologists place bacteria in following major categories

A Archaeobacteria and vibriobacteria

B Eubacteria and Streptococcus

C Eubacteria and Archaeobacteria

D Cyanobacteria and Archaeobacteria

123

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Q 125

How many bacteriophages are formed after 25 minutes of initial infection?

A

250

B

200

C

150

D

100

124

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Q 126

What is not true about cartilage?

A

There are many blood vessels in the cartilage

B

It is a form of connective tissue

C

It covers ends of the bone at the joint

D

Both A and B

125

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Q 127

The water splitting step of photosynthesis is called?

A

hydrolysis

B

chemiosmosis

C

photolysis

D

photosynthesis

126

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Q 128

Apomixis is a form of which of the following?

A

Parthenocarpy

B

Parthenogenesis

C

vernalization

D

all of these

127

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Q 129

What is a vestigial trait?

A

A trait that makes an organism better suited to a habitat

B

A structure that has origins in a common ancestor, but has evolved to perform different functions

C

A change to a cell's genome

D

A structure that has lost its function but has been retained

128

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Q 130

A small organic, non protein molecule that carries chemical groups between enzymes is?

A

cofactor

B

catalyst

C

substrate

D

coenzyme

129

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Q 131

The isolation of different cellular components to determine their chemical composition can be achieved by?

A

cell differentiation

B

chromatography

C

cell fractionation

D

all of these

130

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Q 132

Removal of a parasite from the body of the host is called:

A

Sterilization

B

Disinfection

C

Disinfestation

D

None of the above

131

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Q 133

there is no vaccine against HIV, what is the possible reason?

A

the virus is highly mutated

B

the vaccine is too expensive

C

the virus can be controlled through change in hygiene

D

none of these

132

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Q 134

The persons suffering from chronic bronchitis at the age

A

20

B

30

C

35

D

45

133

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Q 135

Which of the following is an example of a marine annelid?

A

Neries

B

Stylaria

C

Earthworm

D

Leech

134

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Q 136

The disease characterized by the breakdown of alveoli is called:

A

Asthma

B

Tuberculosis

C

Emphysema

D

A and B

135

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Q 137

When was the presence of small filter passing, ultramicroscopic agent in foot and mouth disease was discovered?

A

1898

B

1901

C

1900

D

1889

136

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Q 138

A population of birds encounters a dramatic event that results in a severe decrease in population size. As a result of the newly-decreased population, what type of genetic drift does this population now exhibit?

A Artificial selection

B Founder affect

C Bottleneck affect

D both a and b

137

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Q 139

The offspring of mating between two pure strains are called:

A

Hybrid

B

The P generation

C

Mutants

D

The F₂ generation

138

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Q 140

The types of gametes produced by two pairs of chromosomes can be?

A

2

B

4

C

6

D

8

139

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Q 141

The cerebrospinal fluid is similar in composition to ----

A

amniotic fluid

B

pleural fluid

C

Synovial fluid

D

Blood plasma

140

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Q 142

Deficiency of which element causes yellowing in plants?

A

Magnesium

B

Iron

C

Chlorine

D

Oxygen

141

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Q 143

Which of the following are the first group of invertebrates which have developed a closed circulatory system?

A

Nematodes

B

Arthropods

C

Annelids

D

Molluscs

142

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Q 144

Which of the following cell organelle does not contain DNA?

A

nucleus

B

Mitochondria

C

lysosomes

D

chloroplast

143

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Q 145

NADH is oxidised by which coenzyme in the ETC?

A

Coenzyme c

B

coenzyme q

C

coenzyme b

D

coenzyme a

144

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Q 146

Which of the following is monohybrid cross?

A

$TTYy \times Ttyy$

B

$TT \times tt$

C

both a and b

D

none of these

145

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Q 147

Which of the following statements reflecting Darwin's theory of evolution is false?

A

Genetic variations can be inherited

B

Members of a population produce more offspring than the environment can support

C

Accumulation of adaptations leads to speciation

D

all are true

146

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Q 148

The number of autosomes in human sperm is:

A

11

B

22

C

44

D

45

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Q 149

Which is most likely to extend the entire length of a muscle fibre?

A

sarcomere

B

Myofibril

C

Myosin filament

D

M-line

148

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Q 150

These animals are used as sound absorbers in buildings.

A

Obelia

B

Sponges

C

Aurelia

D

Actinia

149

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Q 151

Air enters the nasal cavity through:

A

lungs

B

trachea

C

bronchi

D

nostrils

150

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Q 152

The survival of an animal depends upon its ability to take some from its environment?

A

Hydrocarbons

B

organic molecules

C

chemicals

D

inorganic molecules

151

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Q 153

Which cell organelle is involved in apoptosis?

A

lysosomes

B

ER

C

Golgi

D

Mitochondria

152

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Q 154 Which portion of the brain is primarily responsible for processing and interpreting information:

A white matter

B Gray matter

C medulla

D All A,B and C

153

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Q 155

The fibrous bands that are stretched across the voice box are known as

A

Voice box

B

bronchioles

C

Vocal cords

D

Vocal duct

154

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Q 156

The main feature of prokaryotic cell is

A

absence of DNA

B

absence of nucleus

C

absence of cell wall

D

absence of plastids

155

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Q 157

End of menstrual cycle in old age is called?

A

andropause

B

gametopause

C

menopause

D

all of these

156

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Q 158

The communication between the two hemispheres is the function of:

A

Corpus callosum

B

Hindbrain

C

cerebellum

D

cerebrum

157

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Q 159

Biorhythms are called circadian which means about one day so they are also called?

A

diurnal tempo

B

diurnal time

C

diurnal rhythms

D

all of these

158

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Q 160

Unlike eukaryotes, prokaryotes have no membrane-bound organelles. How, then, are prokaryotes able to generate energy?

- A Prokaryotes do not generate energy
- B Prokaryotes produce energy via photosynthesis
- C Prokaryotes have specialized mitochondria
- D Prokaryotes generate proton gradients across their plasma membranes

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Q 161

Enzymes in Calvin cycle are found in which cell organelle?

A

Smooth endoplasmic reticulum

B

Chloroplast

C

Mitochondrion

D

Golgi complex

160

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Q 162

Which is true regarding open chain structure of glucose

- A there are six asymmetric carbon
- B there are five asymmetric carbons
- C there are four asymmetric carbon
- D there are three asymmetric carbon

161

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Q 163

The idea that opposed the idea of abiogenesis was proposed by?

A

Robert Hooke

B

Robert brown

C

rudolph virchow

D

lorenz oken

162

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Q 164

Which one of the following is least likely to occur in a boy during puberty?

A

His voice deepens

B

Hair grows on the chest and under the arms

C

Sperm starts to be produced

D

His hair turns grey

163

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Q 165

During transport of carbon dioxide, blood does not become acidic due to:

A

Blood buffer

B

Neutralization of H_2CO_3 by Na_2CO_3

C

Absorption by leukocytes

D

Non-accumulation

164

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Q 166

The animals that have features of both mammals and reptiles are?

A

duckbill platypus

B

spiny anteater

C

wolves

D

both a and b

165

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Q 167

Which of the following is known as a bony joint?

A

synostosis

B

symphysis

C

Syndesmosis

D

interosseous membrane

166

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Q 168

Most non-enveloped DNA viruses assemble their nucleocapsid in the

A

cytoplasm

B

nucleus

C

microtubules

D

golgicomplex

167

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Q 169

The optimum pH for enzyme arginase is?

A

9

B

9.3

C

9.7

D

10

168

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Q 171

Robert Hooke in 1665 reported his work on the cell in which of the following publications?

A

insectia

B

virology

C

micrographia

D

ecology

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Q 172

Viroids lacks

A

RNA

B

enzyme

C

protective protein coat

D

all of these

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Q 173

What is a key difference between spermatogenesis and oogenesis?

A Spermatogenesis results in only 1 sperm; oogenesis results in 4 eggs.

B Spermatogenesis results in 2 sperm; oogenesis results in only 1 egg.

C Spermatogenesis results in 8 sperm; oogenesis results in only 4 eggs.

D Spermatogenesis results in 4 sperm; oogenesis results in only 1 egg.

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Q 174 Which fluid bathes the neurons of brain and spinal cord and cushions against the bumps and jolts?

A Blood

B interstitial fluid

C intracellular fluid

D Cerebrospinal fluid

173

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Q 175

In Anaerobic respiration only _____ % of the energy present within the chemical bond of glucose is converted into ATP?

A

1

B

2

C

3

D

4

174

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Q 176

Which of the following statement is incorrect for fats containing unsaturated fatty acid?

A

They contain double bond

B

They are lighter than water

C

Their specific gravity is less than 1

D

They are usually solid at room temperature

175

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Q 177

The structures of the front flipper of a whale and the forearm of a wolf have similar bone structure and derive from a common ancestor. This is an example of which of the following?

A convergent evolution

B analogous structures

C homologous structures

D bottleneck affect

176

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Q 178

The brain that coordinates skeletal muscle movements is:

A

thalamus

B

amygdala

C

hypothalamus

D

cerebellum

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Q 179

What contributes to genetic variation during human reproduction?

A

Random fertilization

B

Nonrandom mating

C

Independent assortment

D

all of these

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Q 180

Which of these is a characteristic of prokaryotic cells?

A

Absence of cell organelles

B

Absence of nucleus

C

Presence of 70S ribosomes

D

all of these

179

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Q 181

I can't display more books! There aren't enough _____ to put them on.

A

leaves

B

cases

C

shelves

D

spaces

180

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Demonstrate correct use of articles and prepositions Demonstrate correct use of subject-verb agreement
Demonstrate correct use of writing conventions of spelling, capitalization and punctuation to clarify meaning

Q 182

They have been (A)/ very close friends(B) until they quarelled (C)/ over a petty issue. (D)

A

They have been

B

very close friends

C

until they quarelled

D

over a petty issue.

181

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Q 183

His pants ____ torn during the match.

A

is

B

are

C

were

D

was

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Q 184

I had

A

I'd

B

Id

C

Id'

D

I'hd

183

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Q 185

The thief has ____ all my belongings.

A

robbed

B

taken

C

stolen

D

taken away

184

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Q 186

Which of the sentences is correct?

A

Last year I go to India.

B

Last year I went to India.

C

Last year I am going to India.

D

Last year I will go to India.

185

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Q 187

Choose the correct sentence.

A

The sun was rising; we had to move.

B

The sun was rising; we had to move?

C

The sun was rising, we had to move.

D

The sun was rising we had to move.

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Q 188

Which brand do you _____, Honda or Toyota?

A

rather

B

eat

C

prefer

D

wear

187

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Q 189

It will have _____ raining by evening.

A

stops

B

stopped

C

stop

D

stopping

188

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Q 190

Neither of the paintings _____ (is) sold.

A

is

B

were

C

was

D

are

189

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Q 191

She _____ not take a lot of stress.

A

need

B

needs

C

needing

D

has need

190

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Q 192 Some people are very keen ---- working in a team, but some others don't like depending on others

A on

B in

C up

D to

191

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Q 193

innumerable

A

limited

B

weary

C

countless

D

harmless

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Demonstrate correct use of articles and prepositions Demonstrate correct use of subject-verb agreement
Demonstrate correct use of writing conventions of spelling, capitalization and punctuation to clarify meaning

Q 194

We are trying (A)/ to locate the (B) /historical city for(C) /the past two years. (D)

A

We were trying

B

to locate the

C

historical city for

D

the past two years.

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Q 195

This is _____ good company to work with.

A

a

B

an

C

the

D

no article

194

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Q 196

will not

A

wont

B

won't

C

wont'

D

wo'nt

195

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Q 197

Sumaira was surprised when her boss didn't _____ the dinner they had at the restaurant.

A

buy

B

pay

C

pay for

D

spend

196

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Q 198

The valley is known for its _____ growth of vegetation.

A

luxurious

B

luxury

C

luxuriant

D

luxuriously

197

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Q 199 By next Saturday, I _____ (work) on this painting for exactly one month.

A will have been working

B will be working

C will work

D worked

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Demonstrate correct use of articles and prepositions Demonstrate correct use of subject-verb agreement
Demonstrate correct use of writing conventions of spelling, capitalization and punctuation to clarify meaning

Q 200

Choose the correct sentence.

A

I can't see Tims car, there must have been an accident.

B

I can't see Tim's car, there must have been an accident.

C

I can't see Tims car there must have been an accident.

D

I can't see Tims car; there must have been an accident.

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Q 201

Select the odd word from the following

A

Herb

B

Flower

C

Tree

D

Shrub

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Q 202

Which letter comes before G and after E?

A

B

B

C

C

F

D

D

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Next Question >

Q 202

Which letter comes before G and after E?

A

B

B

C

C

F

D

D

201

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Q 203

Statement Should admission to the professional degrees in Pakistan be given only on merit without any concession to any particular group of students? Arguments (I) Yes. This will improve the quality of the professional institutes and degrees as they will be able to complete the degree successfully. (II) No. This will keep a large number of socially and economically backward students out of the reach of professional institutes and degrees.

- A If argument I is strong
- B If only argument II is strong
- C If both I and II are strong.
- D If neither I nor II is strong

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Q 203

Statement Should admission to the professional degrees in Pakistan be given only on merit without any concession to any particular group of students? Arguments (I) Yes. This will improve the quality of the professional institutes and degrees as they will be able to complete the degree successfully. (II) No. This will keep a large number of socially and economically backward students out of the reach of professional institutes and degrees.

- A If argument I is strong
- B If only argument II is strong
- C If both I and II are strong.
- D If neither I nor II is strong

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Q 204

I.The people of Kashmir are under curfew for unlimited period. II. The military army has killed more than 500 people in Kashmir.

A Statement I is the cause and statement II is its effect.

B Statement II is the cause and statement I is its effect.

C Both statements I and II are independent causes

D Both statements I and II are the effects of independent cause.

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Q 205

Statements All apples are bananas. No banana is a mango. Some mangoes are oranges. Conclusions (I) All oranges can never be bananas. (II) Some mangoes are apples.

A Only conclusion (I) follows

B Only conclusion (II) follows

C Both conclusions follow

D Both of them do not follow

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Q 206

Statement The availability of imported fruits has increased in the indigenous market and so the demand for indigenous fruits has been decreased. I. To help the indigenous producers of fruits, the Government should impose high import duty on these fruits, even if these are not of good quality. II. The fruit vendors should stop selling imported fruits. So that the demand for indigenous fruits would be increased.

A both of them follows

B None of them follows

C Only I follows

D Only II follows

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Q 207

Statement: The farmers have decided against selling their Kharif crops to the government agencies. The government has reduced the procurement price of Kharif crops starting from last month to the next six months.

- A Statement I is the cause and statement II is its effect.
- B Statement II is the cause and statement I is its effect
- C Both the statements I and II are independent causes
- D Both the statements I and II are effects of independent causes

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Q 208

If in a certain language, NOIDA is coded as OPJEB, how is DELHI coded in that language?

A

CDKGH

B

EFMIJ

C

FGNJK

D

IHLED

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Q 209

Which country has the most news channels?

A

Russia

B

India

C

Australia

D

Brazil

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Q 210

A four-person crew from Classic Colors is painting Mr. Zohaib's house. Ahmed is painting the front of the house. Maira is in the alley behind the house painting the back. Ayesha is painting the window frames on the north side, Hamza is on the south. If Zohaib switches places with Ayesha, and Ayesha then switches places with Hamza, where is Hamza?

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SKIPPED QUESTIONS

Q 210

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SKIPPED QUESTIONS

Q1

Function of Smooth Endoplasmic Reticulum (SER) is _____.

A

Synthesis of intracellular proteins.

B

Synthesis of extracellular proteins.

C

Synthesis of extracellular enzymes.

D

Synthesis of lipids.

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Q2

With the passage of time rate of reaction always

A

Increases

B

Remains constant

C

Decreases

D

Increases exponentially

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Q3

The bond formed b/w NH_3 and BF_3 is co-ordinate bond because NH_3 _____ due to presence of one lone pair

A

acceptor

B

donor

C

neutral

D

negatively charged

[< Previous Question](#)[Next Question >](#)

Q4

Glacial acetic acid is _____?

A

Pure liquid acetic acid at 17°C

B

Pure solid acetic acid at 17°C

C

Pure solid acetic acid at 118°C

D

Pure solid acetic acid at -20 °C

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Q5

The principle behind the working of cathode ray oscilloscope is

A

oscillation

B

half wave rectification

C

full wave rectification

D

none of these

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Q6 Equilibrium constant for Ideal gases in terms of partial pressure is denoted by

A K_c

B K

C K_p

D None of these

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Q7

What is the radius of circular path, if particle has mass m and charge q

A

$$r = qb/m$$

B

$$r = mv/B$$

C

$$r = mv/qB$$

D

$$r = mvr/qB$$

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Q8

Ethane is obtained by electrolyzing _____

A

Potassium formate

B

Potassium succinate

C

Potassium acetate

D

Potassium fumarate

[< Previous Question](#)[Next Question >](#)

Q9

The idea that opposed the idea of abiogenesis was proposed by?

A

Robert Hooke

B

Robert brown

C

rudolph virchow

D

lorenz oken

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Q10

Which one of the following is least likely to occur in a boy during puberty?

A

His voice deepens

B

Hair grows on the chest and under the arms

C

Sperm starts to be produced

D

His hair turns grey

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Q11

During transport of carbon dioxide, blood does not become acidic due to:

A

Blood buffer

B

Neutralization of H_2CO_3 by Na_2CO_3

C

Absorption by leukocytes

D

Non-accumulation

[< Previous Question](#)[Next Question >](#)

Q12

Reduction of ethanoic acid with LiAlH_4 produces _____?

A

Propanol

B

Ethanal

C

Ethanol

D

Ethane

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Q13

The e/m value is maximum for ____ gas because of ____ value of "m" for positive rays obtained from it.

A

Oxygen gas, lowest

B

hydrogen gas, highest

C

hydrogen gas ,lowest

D

helium gas ,highest

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Q14 If Water is present on a cup placed on a table, what will be the system in this case?

A Water

B Water in cup

C Whole table

D All of these

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Q15

What is the order of SN_2 reactions?

A

1st order

B

zero order

C

2nd order

D

3rd order

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Q16

Angles in a Unit Cell are denoted by

A

 x, y, z

B

 a, b, c

C

 α, β, γ

D

 i, j, k [< Previous Question](#)[Next Question >](#)

Q17

The compounds in which similar groups are present on the same side of double bond are called as ____?

A

Trans isomers

B

Positional isomers

C

Cis isomer

D

None of these

[< Previous Question](#)[Next Question >](#)

Q18

Which of the uranium isotope have larger mass.

A

6.22×10^{23} atoms of U - 235

B

6.22×10^{23} atoms of U - 238

C

6.22×10^{23} atoms of U - 234

D

all of these

[< Previous Question](#)[Next Question >](#)

Q19

Salt Bridge is used for the purpose of

A

Producing Electrons

B

Circuit Completion

C

Increasing speed of electrons

D

All of these

[< Previous Question](#)[Next Question >](#)

Q20

In nature fatty acids occur as _____ of glycerol?

A

Acid halides

B

Binary compounds

C

Esters

D

Alkanes

[< Previous Question](#)[Next Question >](#)

Q21

Voltaic Cell can be converted into a Reverse galvanic Cell by

A

Changing positions of electrodes

B

Replacing Salt Bridge with a Wire

C

Providing an External Source of electricity

D

All of these

[< Previous Question](#)[Next Question >](#)

Q22

80% of the coal is used in _____?

A

lime kiln

B

Domestic purposes

C

Fuel

D

Motor bikes

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Q23 Which of the following is true about the kinetics of bimolecular elimination reactions?

A 1st order reaction

B 2nd order reaction

C Zero order reaction

D 3rd order reaction

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Q24

2 moles of octane (C_8H_{18}) burns with 25 moles of oxygen (O_2) and produced ____ moles of carbon dioxide along with 18 moles of water

A 14

B 16

C 18

D 2

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Q25

Which of the following is a strong acid?

A

Ethane

B

Ethyl Chloride

C

Ethanol

D

Phenol

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Q26

If the conductor resistance is 50 ohm and the current passing through it is 5 A. What is the value of potential difference?

A

150V

B

250V

C

50V

D

15V

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Q27

The number of autosomes in human sperm is:

A

11

B

22

C

44

D

45

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Q28

First law of thermodynamics is a special case of

A

Newton's law

B

Charles's law

C

Conservation of energy

D

Conservation of entropy

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Q29

A half wave rectifier is equivalent to

A

Clamper

B

Clipper

C

Clamper circuit with negative bias

D

Clamper circuit with positive bias

[◀ Previous Question](#)[Next Question ▶](#)

Q30

One radian equals to ____ degree

A

30

B

60

C

90

D

none of these

[< Previous Question](#)[Next Question >](#)

Q31

The reason that white light is not harmful radiation is that

A

its speed is less than other radiations

B

it is composed of different lights

C

it is originated from non radioactive element

D

none of these

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Q32

If more oxygen is present, the rubisco starts:

A

Respiration

B

Photorespiration

C

Carboxylase

D

None of these

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Q33

The isolation of different cellular components to determine their chemical composition can be achieved by?

A

cell differentiation

B

chromatography

C

cell fractionation

D

all of these

[< Previous Question](#)[Next Question >](#)

Q34

The offspring of mating between two pure strains are called:

A

Hybrid

B

The P generation

C

Mutants

D

The F₂ generation

[< Previous Question](#)[Next Question >](#)

Q35

Which gas among them shows maximum ideal behavior

A

Ammonia

B

Hydrogen

C

Helium

D

Radon

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Q36

Coherent source of light means

A

multiple wavelength

B

double wavelength

C

single wavelength

D

coherent photons

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Q37

The energy is __ when oppositely charged ions brought close to each other

A

released

B

absorbed

C

remain same

D

constant

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Q38

A structural component that is found in all viruses is?

A

envelope

B

DNA

C

Capsid

D

Tail Fibers

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Q39

A four-person crew from Classic Colors is painting Mr. Zohaib's house. Ahmed is painting the front of the house. Maira is in the alley behind the house painting the back. Ayesha is painting the window frames on the north side, Hamza is on the south. If Zohaib switches places with Ayesha, and Ayesha then switches places with Hamza, where is Hamza?

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C in front of the house

D on the south side of the house

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Q40

The general name of ore $\text{CaSO}_4 \cdot \text{H}_2\text{O}$ is

A

Gypsum

B

Dolomite

C

Calcite

D

Plaster of Paris

[< Previous Question](#)[Next Question >](#)

Q41 Electron and proton both with same momentum enter perpendicularly in uniform field

A path of proton will be more curved

B path of electron will be more curved

C both have same curved path

D path of both will straight line

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Q42

A sample of F-18 is used internally as a medical diagnostic tool to look for the effect of the positron decay ($T_{1/2} = 110 \text{ min}$). How long does it take for 99 % of the F-18 to decay?

A 10.2 h

B 11.2 h

C 14.2 h

D 12.2 h

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Q43

Viroids lacks

A

RNA

B

enzyme

C

protective protein coat

D

all of these

[< Previous Question](#)[Next Question >](#)

Q44

Deficiency of which element causes yellowing in plants?

A

Magnesium

B

Iron

C

Chlorine

D

Oxygen

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Q45 Sumaira was surprised when her boss didn't _____ the dinner they had at the restaurant.

A buy

B pay

C pay for

D spend

◀ Previous Question

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Q46

Which phenol is most acidic in nature

A

salicylic acid

B

picric acid

C

cresol

D

O - nitrophenol

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Q47 soap and detergents show cleansing action because of the presence of __ of molecules

A opposite poles

B polar part

C non polar part

D positive end

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Q48

To avoid long reaction time and to get equilibrium mixture quickly we add

A

More reactants

B

catalyst

C

inhibitors

D

enzymes

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Q49

Protein component of enzyme is called_____.

A

Coenzyme

B

Cofactor

C

Apo-enzyme

D

Prosthetic group

[◀ Previous Question](#)[Next Question ▶](#)

Q50

Who attributed the deviation of real gases from ideal behavior

A

Boyle's law

B

Charles's law

C

Avogadro's law

D

Van der Waals

[< Previous Question](#)[Next Question >](#)

Q51

A _____ is the force, which holds together two or more atoms or ions to form a large variety of compounds

A

ionic bond

B

chemical bond

C

covalent bond

D

metallic bond

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Q52

Which of the following test is not given by Aldehyde ?

A

Benedict test

B

Tollen's test

C

Nitroprusside test

D

Fehling's test

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Q53

Catalytic activity of enzyme is enhanced by:

A

Activator

B

Coenzyme

C

Co-factor

D

Both A and B

◀ Previous Question

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Q54

The forces of attraction in Molecular solids

A

Strong

B

Very Strong

C

Weak

D

Moderate

[< Previous Question](#)[Next Question >](#)

Q55

Which of the following is a Unsaturated fatty acid?

A

Palmitic acid

B

Stearic acid

C

Oleic acid

D

Ethanoic acid

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Q56

Electrolysis of a dilute solution of NaCl results at the anode

A

Sodium

B

Hydrogen

C

Chlorine

D

Oxygen

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Q57

For 3rd order reactions the half-life is

A

inversely proportional to square of concentration

B

directly proportional to cube of concentration

C

inversely proportional to concentration

D

directly proportional to concentration

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Q58

The formation of negative ion is a/an ____ process

A

exothermic

B

endothermic

C

both A & B

D

none of these

[< Previous Question](#)[Next Question >](#)

Q59

If at equilibrium state temperature is increased, it will favor

A

Exothermic Reactions

B

Endothermic Reactions

C

Reversible gaseous reactions

D

Irreversible reactions

[< Previous Question](#)[Next Question >](#)

Q60

Energy is __ when an electron is added to the isolated gaseous atom

A

increased

B

released

C

decreased

D

absorbed

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Q61

For the reaction; $\frac{1}{2} \text{H}_2 \rightarrow \text{H}$, the change in enthalpy is called as _____?

A

Enthalpy of formation

B

Enthalpy of neutralization

C

Enthalpy of atomization

D

Enthalpy of Reaction

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Q62

Bisulfite addition product when heated with mineral acid yield?

A

Carboxylic acid

B

Alpha hydroxy acid

C

Starting material from which it is formed

D

Alpha beta unsaturated compound

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Q63

In CCl_4 , all C-Cl bonds are _____ but molecule is ___ overall

A

polar, nonpolar

B

nonpolar, neutral

C

polar, Neutral

D

neutral, on polar

[< Previous Question](#)[Next Question >](#)

Q64

OH-is added when reaction is in

A

Acidic Medium

B

Basic Medium

C

Neutral solution

D

All of these

[< Previous Question](#)[Next Question >](#)

Q65

At high altitudes, the pilots feel uncomfortable breathing because the partial pressure of oxygen is lower than

A

16 torr

B

159 torr

C

158 torr

D

157 torr

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Q66

Falling water of a waterfall is an example of

A

Reversible Reaction

B

Spontaneous Reactions

C

Endothermic Reactions

D

All of these

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Q67

London force of interaction forms crystals

A

covalent crystals

B

ionic crystals

C

molecular crystals

D

metallic crystals

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Q68

The slope determined by drawing a right angled triangle drawn with tangent as hypotenuse will be same

A

with different sizes of triangles drawn

B

at different point on curve

C

at the start and end of curve

D

All of these

[< Previous Question](#)[Next Question >](#)

Q69

In some cases during atomic orbital hybridization, ground state electrons promoted to excited states , as a result __increases

A

number of shells

B

number of electrons

C

number of unpaired electrons

D

number of bonds

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Q70 Which one of the following is the correct value for the enthalpy of formation of CO?

A -110kJ/mol

B -210kJ/mol

C -111kJ/mol

D None of these

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Q71

Non-typical transition elements belong to?

A

2B

B

3B

C

221B

D

1B

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Q72

Electrolysis is a

A

Spontaneous Reactions

B

Oxidation-reduction reaction

C

Reduction Reaction

D

Oxidation Reaction

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Q73 Which of the following catalyst is used in the industrial preparation of methanol?

A Zinc oxide and alumina

B Alumina and silica

C Silica and Chromium oxide

D Zinc oxide and Chromium oxide

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Q74

If in a solution of alkyl halide in a nonpolar solvent, base is added which of the following reaction takes place?

A SN_2

B E_1

C SN_1

D E_2

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Q75

LDH-1 is raised in which disease:

A

Rickets

B

Anemia

C

Heart disorders

D

Stroke

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Q76

What is the correct relation between ΔH and intermolecular forces ?

A

Higher ΔH weaker intermolecular forces

B

Higher ΔH , higher intermolecular forces

C

Lower ΔH , higher intermolecular forces

D

None of these

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Q77

The electrical conductivity of metal sometimes decreases with the

A

increase in pressure

B

increase in temperature

C

decrease in temperature

D

decrease in pressure

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Q78

Wave nature of He atom is similar to

A

alpha rays

B

beta rays

C

gamma rays

D

x-rays

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Q79

A star moving away from earth shows:...

A

green shift

B

red shift

C

blue shift

D

none of these

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Q80

Oscillatory or vibratory motion can be defined as:

A

upward motion from mean position

B

right hand motion of the pendulum

C

to and fro motion about the mean position

D

random movement of gas particles

[< Previous Question](#)[Next Question >](#)

Q81

The efficiency of diesel engine is:....

A

10% to 20%

B

20% to 35%

C

35% to 40%

D

40% to 50%

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Q82 A body is travelling in a circle of radius r at a speed v . Its centripetal acceleration will be:

A $a = r^2 / v$

B $a = r / v$

C $a = v^2 / r$

D $a = v / r$

[◀ Previous Question](#)

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Q83

Kilowatt-hour(kWh) is a unit of?

A

Power

B

Energy

C

current

D

resistance

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Q84

The process by which a heavy nucleus splits up into lighter nuclei is known as

A

fission

B

fusion

C

alpha-decay

D

a chain reaction

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Q85

If an object moves with constant velocity then its acceleration is

A

zero

B

nonzero

C

infinite

D

none of these

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Q86

The electric potential at infinite distance is:....

A

infinity

B

zero

C

positive

D

negative

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Q87 Which of the following types of force can do no work on the particle upon which it acts

A frictional force

B gravitational force

C centripetal force

D elastic force

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Q88

The current passing through a conductor is directly proportional to the potential difference applied across its terminals, provided the temperature and other physical conditions of the conductor does not change

A

Gauss's law

B

Lenz law

C

Pascal's law

D

Ohm's law

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Q89

The radius of atom is of the order of

A

 10^{10} m

B

 10^{-10} m

C

 10^{-14} m

D

 10^{14} m [< Previous Question](#)[Next Question >](#)

Q90

The length of a conductor is halved. Its resistance will be :

A

halved

B

doubled

C

unchanged

D

quadrupled

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Q91

Work done by a conservative force in a complete cycle is

A

Zero

B

more than zero

C

less than zero

D

none of these

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Q92

Numbers of photon electrons emitted from metal depends upon :

A

Intensity of incident light

B

Energy of incident light

C

Wavelength of incident light

D

Frequency of incident light

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Q93

 $F = e(v \times B)$ is valid for

A

electron

B

proton

C

neutron

D

all

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Q94

Number of atoms decaying in a particular period is _____ to number of atoms present in the beginning of the period

A

directly proportional

B

inversely proportional

C

equal

D

independent

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Q95

Two copper conductors have equal length. The cross-sectional area of one conductor is four times that of the other. If the conductor having smaller cross-sectional area has a resistance of 40 ohms the resistance of other conductor will be

A 160 ohm

B 80 ohm

C 20 ohm

D 10 ohm

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Q96

Which is not the result of special theory of relativity

A

Length contraction

B

Space - time transformation

C

Time dilation

D

Mass variation

[< Previous Question](#)[Next Question >](#)

Q97

Calculate the energy of a photon of wavelength 6600 angstroms.

A

 $0.3 \times 10^{-19} \text{ J}$

B

 $3 \times 10^{-19} \text{ J}$

C

 $30 \times 10^{-19} \text{ J}$

D

 $300 \times 10^{-19} \text{ J}$ [< Previous Question](#)[Next Question >](#)

Q98

A 1.0 kW heater supplies energy to a liquid of mass 1 kg. The temperature of the liquid changes by 80 K in a time of 400 s. The specific heat capacity of the liquid is $4.0 \text{ kJ / kg}^\circ\text{K}$. What is the average power lost by the liquid?

A 100

B 200

C 400

D 800

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Q99

Faraday's law explains how electric field will interact with

A

electric field

B

magnetic field

C

battery

D

none of these

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Q100

You have two identical capacitors. They can be connected in series or in parallel. If you want the smallest equivalent capacitance for the combination, how should you connect them?

A

in parallel

B

in series

C

either way because both combinations have the same capacitance

D

we can not determine, because presence of resistance in the circuit determines capacitance

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Q101

Projectile motion has _____ acceleration at each point of trajectory

A

variable

B

constant

C

zero

D

none of these

[< Previous Question](#)[Next Question >](#)

Q102

Ripple factor of full wave rectifier is

A

1.21

B

0.6

C

0.482

D

0.9

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Q103

When no heat enters or leaves the system, it is called:...

A

isothermal

B

adiabatic

C

isovolumetric

D

isobaric

[< Previous Question](#)[Next Question >](#)

Q104

Michelson measured the length of standard metre in terms of the wavelength of:

A

green cadmium light

B

violet cadmium light

C

red cadmium light

D

blue cadmium light

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Q105

A radioactive source has a half-life of 80 s. How long will it take for $7/8$ of the source to decay?

A 10s

B 70s

C 240s

D 640s

[< Previous Question](#)[Next Question >](#)

Q105

A radioactive source has a half-life of 80 s. How long will it take for $7/8$ of the source to decay?

A 10s

B 70s

C 240s

D 640s

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Q106

If f_1 and f_2 are frequencies of two tuning forks, such that $f_1 < f_2$, then number of beats produced in one second are:

A $f_2 - f_1$

B $f_2 * f_1$

C $f_1 - f_2$

D $f_2 + f_1$

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Q107

The maximum instantaneous value measured from zero value is known as?

A

peak value

B

peak to peak value

C

cycle

D

period

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Q108

A longitudinal wave is moving through a medium. Which of the following statements about direction of propagation of wave and displacement of the medium is true?

A

displacement of medium = parallel to the energy transfer direction of propagation of wave = parallel to the energy transfer

B

displacement of medium = parallel to the energy transfer direction of propagation of wave = perpendicular to the energy transfer

C

displacement of medium = perpendicular to the energy transfer direction of propagation of wave = parallel to the energy transfer

D

displacement of medium = perpendicular to the energy transfer direction of propagation of wave = perpendicular to the energy transfer

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Q109

Consider a peak rectifier fed by a 60-Hz sinusoid having a peak value $V_p = 100$ V. Let the load resistance $R = 10$ k Ω . Calculate the fraction of the cycle during which the diode is conducting

A 1.06 %

B 2.06%

C 3.18 %

D 4.82%

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Q110

For an unknown element X the wavelength recorded is 2.9×10^{-2} m, the half life of element is ____ years

A

50

B

100

C

1000

D

none of these

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Q111

Acceleration of a moving car when brakes are applied is

A

negative

B

zero

C

positive

D

infinite

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Q112

Consider a car is travelling for one hour. Which of the following cases has the greatest average velocity in east-direction?

- A car travels 20 km due east
- B car travels 60 km due east, then turns around and travels 40 km due west
- C car travels 70 km due east
- D car travels 30 km due west, then turns around and travels 30 km due east

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Q113

The angular acceleration has units

A

rad/sec

B

sec/rad

C

sec²

D

none of these

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Q114

Which rays are lasers?

A

x-rays

B

beta rays

C

gamma rays

D

coherent photons

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Q115 A force $F = 7 - 2x + 3x^2$ is applied on 2 kg body, work done to displace the body from $x=0$ to $x=5$ m

A 70 J

B 270 J

C 35 J

D 135 J

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Q116

Which of the following remains unchanged in transformer

A

Voltage

B

current

C

Power

D

Capacitance

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Q117 What is the internal energy change in system that has absorbed 800J of heat and work done is 500J?

A 200J

B 550J

C 600J

D 300J

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Q118

Find the resistance if voltage of the circuit is 45 volts and current 30 Amp?

A 1.6 ohm

B 1.5 ohm

C 1.7 ohm

D 1.8 ohm

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Q119 A half wave rectifier is operating from 50 Hz mains. Fundamental frequency of ripple will be

A 100 Hz

B 25 Hz

C 200Hz

D 50Hz

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Q120

Which of the following statements is incorrect about the photons

A

Momentum of photon h/λ

B

Rest mass of photon is zero

C

photon exert no pressure

D

Energy of photon is $h\nu$

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Q121

The alternative forms of same gene is called which of the following?

A

locus

B

gene

C

allele

D

phenotype

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Q122

As long as two species occupy different niches, there is?

A

competition

B

no competition

C

gene linkage

D

polymorphism

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Q123

Chlorophylls are found embedded in the _____ membranes?

A

Stroma

B

Grana

C

Thylakoid

D

Intergrana

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Q124

Which of the following is true of actin and myosin filaments?

A Troponin, calcium, and tropomyosin interact with the thick filament

B actin molecules are classified as thin filaments, whereas myosin molecules are classified as thick filaments

C both a and b

D none of these

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Q125

What is the function of the fluid secreted by sertoli cells?

A

provides liquid medium

B

Provides protection to sperms

C

Provides nourishment to sperms

D

All A,B and C are correct

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Q126

Mating between relatives is called which of the following?

A

ex breeding

B

breeding

C

inbreeding

D

outbreeding

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Q127

The darker, outer portion of the brain is called:

A

White matter

B

Gray matter

C

Reflex arc

D

Medulla

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Q128

Microbiologists place bacteria in following major categories

A

Archaea and vibriobacteria

B

Eubacteria and Streptococcus

C

Eubacteria and Archaeobacteria

D

Cyanobacteria and Archaeobacteria

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Q129

How many bacteriophages are formed after 25 minutes of initial infection?

A 250

B 200

C 150

D 100

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Q130

What is not true about cartilage?

A

There are many blood vessels in the cartilage

B

It is a form of connective tissue

C

It covers ends of the bone at the joint

D

Both A and B

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Q131

The water splitting step of photosynthesis is called?

A

hydrolysis

B

chemiosmosis

C

photolysis

D

photosynthesis

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Q132

What is a vestigial trait?

A

A trait that makes an organism better suited to a habitat

B

A structure that has origins in a common ancestor, but has evolved to perform different functions

C

A change to a cell's genome

D

A structure that has lost its function but has been retained

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Q133

A small organic, non protein molecule that carries chemical groups between enzymes is?

A

cofactor

B

catalyst

C

substrate

D

coenzyme

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Q134

Removal of a parasite from the body of the host is called:

A

Sterilization

B

Disinfection

C

Disinfestation

D

None of the above

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Q135

there is no vaccine against HIV, what is the possible reason?

A

the virus is highly mutated

B

the vaccine is too expensive

C

the virus can be controlled through change in hygiene

D

none of these

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Q136

The persons suffering from chronic bronchitis at the age

A 20

B 30

C 35

D 45

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Q137

Which of the following is an example of a marine annelid?

A

Neries

B

Stylaria

C

Earthworm

D

Leech

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Q138

The disease characterized by the breakdown of alveoli is called:

A

Asthma

B

Tuberculosis

C

Emphysema

D

A and B

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Q139

When was the presence of small filter passing, ultramicroscopic agent in foot and mouth disease was discovered?

A

1898

B

1901

C

1900

D

1889

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Q140

A population of birds encounters a dramatic event that results in a severe decrease in population size. As a result of the newly-decreased population, what type of genetic drift does this population now exhibit?

A Artificial selection

B Founder affect

C Bottleneck affect

D both a and b

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Q141

The types of gametes produced by two pairs of chromosomes can be?

A

2

B

4

C

6

D

8

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Q142

The cerebrospinal fluid is similar in composition to ----

A

amniotic fluid

B

pleural fluid

C

Synovial fluid

D

Blood plasma

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Q143

Which of the following are the first group of invertebrates which have developed a closed circulatory system?

A

Nematodes

B

Arthropods

C

Annelids

D

Molluscs

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Q144

Which of the following cell organelle does not contain DNA?

A

nucleus

B

Mitochondria

C

lysosomes

D

chloroplast

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Q145

NADH is oxidised by which coenzyme in the ETC?

A

Coenzyme c

B

coenzyme q

C

coenzyme b

D

coenzyme a

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Q146

Which of the following is monohybrid cross?

A

$TTYy \times Ttyy$

B

$TT \times tt$

C

both a and b

D

none of these

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Q147

Which of the following statements reflecting Darwin's theory of evolution is false?

A

Genetic variations can be inherited

B

Members of a population produce more offspring than the environment can support

C

Accumulation of adaptations leads to speciation

D

all are true

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Q148

Which is most likely to extend the entire length of a muscle fibre?

A

sarcomere

B

Myofibril

C

Myosin filament

D

M-line

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Q149

These animals are used as sound absorbers in buildings.

A

Obelia

B

Sponges

C

Aurelia

D

Actinia

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Q150

Air enters the nasal cavity through:

A

lungs

B

trachea

C

bronchi

D

nostrils

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Q151

The survival of an animal depends upon its ability to take some from its environment?

A

Hydrocarbons

B

organic molecules

C

chemicals

D

inorganic molecules

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Q152

Which cell organelle is involved in apoptosis?

A

lysosomes

B

ER

C

Golgi

D

Mitochondria

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Q153 Which portion of the brain is primarily responsible for processing and interpreting information:

A white matter

B Gray matter

C medulla

D All A,B and C

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Q154

The fibrous bands that are stretched across the voice box are known as

A

Voice box

B

bronchioles

C

Vocal cords

D

Vocal duct

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Q155

End of menstrual cycle in old age is called?

A

andropause

B

gametopause

C

menopause

D

all of these

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Q156

Biorhythms are called circadian which means about one day so they are also called?

A

diurnal tempo

B

diurnal time

C

diurnal rhythms

D

all of these

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Q157

Unlike eukaryotes, prokaryotes have no membrane-bound organelles. How, then, are prokaryotes able to generate energy?

A

Prokaryotes do not generate energy

B

Prokaryotes produce energy via photosynthesis

C

Prokaryotes have specialized mitochondria

D

Prokaryotes generate proton gradients across their plasma membranes

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Q158

Enzymes in Calvin cycle are found in which cell organelle?

A

Smooth endoplasmic reticulum

B

Chloroplast

C

Mitochondrion

D

Golgi complex

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Q159

Which is true regarding open chain structure of glucose

A

there are six asymmetric carbon

B

there are five asymmetric carbons

C

there are four asymmetric carbon

D

there are three asymmetric carbon

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Q160

The animals that have features of both mammals and reptiles are?

A

duckbill platypus

B

spiny anteater

C

wolves

D

both a and b

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Q161

Which of the following is known as a bony joint?

A

synostosis

B

symphysis

C

Syndesmosis

D

interosseous membrane

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Q162

Most non-enveloped DNA viruses assemble their nucleocapsid in the

A

cytoplasm

B

nucleus

C

microtubules

D

golgicomplex

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Q163

The optimum pH for enzyme arginase is?

A

9

B

9.3

C

9.7

D

10

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Q164

Which of the following is not an evidence for evolution?

A

Fossil record

B

Common ancestor organisms

C

Vestigial structures

D

none of these

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Q165

Robert Hooke in 1665 reported his work on the cell in which of the following publications?

A

insectia

B

virology

C

micrographia

D

ecology

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Q166

What is a key difference between spermatogenesis and oogenesis?

A Spermatogenesis results in only 1 sperm; oogenesis results in 4 eggs.

B Spermatogenesis results in 2 sperm; oogenesis results in only 1 egg.

C Spermatogenesis results in 8 sperm; oogenesis results in only 4 eggs.

D Spermatogenesis results in 4 sperm; oogenesis results in only 1 egg.

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Q167 Which fluid bathes the neurons of brain and spinal cord and cushions against the bumps and jolts?

A Blood

B interstitial fluid

C intracellular fluid

D Cerebrospinal fluid

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Q168

In Anaerobic respiration only _____ % of the energy present within the chemical bond of glucose is converted into ATP?

A 1

B 2

C 3

D 4

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Q169

Which of the following statement is incorrect for fats containing unsaturated fatty acid?

A

They contain double bond

B

They are lighter than water

C

Their specific gravity is less than 1

D

They are usually solid at room temperature

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Q170

The structures of the front flipper of a whale and the forearm of a wolf have similar bone structure and derive from a common ancestor. This is an example of which of the following?

A convergent evolution

B analogous structures

C homologous structures

D bottleneck affect

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Q171

The brain that coordinates skeletal muscle movements is:

A

thalamus

B

amygdala

C

hypothalamus

D

cerebellum

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Q172

What contributes to genetic variation during human reproduction?

A

Random fertilization

B

Nonrandom mating

C

Independent assortment

D

all of these

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Q173

Which of these is a characteristic of prokaryotic cells?

A

Absence of cell organelles

B

Absence of nucleus

C

Presence of 70S ribosomes

D

all of these

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Q174

I can't display more books! There aren't enough _____ to put them on.

A

leaves

B

cases

C

shelves

D

spaces

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Q175 They have been (A)/ very close friends(B) until they quarelled (C)/ over a petty issue. (D)

A They have been

B very close friends

C until they quarelled

D over a petty issue.

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Q176

His pants ____ torn during the match.

A

is

B

are

C

were

D

was

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Q177

I had

A

I'd

B

Id

C

Id'

D

I'hd

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Q178

The thief has ____ all my belongings.

A

robbed

B

taken

C

stolen

D

taken away

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Q179

Which of the sentences is correct?

A

Last year I go to India.

B

Last year I went to India.

C

Last year I am going to India.

D

Last year I will go to India.

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Q180

Which brand do you _____, Honda or Toyota?

A

rather

B

eat

C

prefer

D

wear

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Q181

It will have _____ raining by evening.

A

stops

B

stopped

C

stop

D

stopping

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Q182

Neither of the paintings _____ (is) sold.

A

is

B

were

C

was

D

are

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Q183

She _____ not take a lot of stress.

A

need

B

needs

C

needing

D

has need

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Q184 Some people are very keen ---- working in a team, but some others don't like depending on others

A on

B in

C up

D to

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Q185

innumerable

A

limited

B

weary

C

countless

D

harmless

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Q186

We are trying (A)/ to locate the (B) /historical city for(C) /the past two years. (D)

A

We were trying

B

to locate the

C

historical city for

D

the past two years.

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Q187

This is _____ good company to work with.

A

a

B

an

C

the

D

no article

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Q188

will not

A

wont

B

won't

C

wont'

D

wo'nt

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Q189

The valley is known for its _____ growth of vegetation.

A

luxurious

B

luxury

C

luxuriant

D

luxuriously

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Q190

By next Saturday, I _____ (work) on this painting for exactly one month.

A

will have been working

B

will be working

C

will work

D

worked

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Q191

Choose the correct sentence.

A

I can't see Tim's car, there must have been an accident.

B

I can't see Tim's car, there must have been an accident.

C

I can't see Tim's car there must have been an accident.

D

I can't see Tim's car; there must have been an accident.

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Q192

Select the odd word from the following

A

Herb

B

Flower

C

Tree

D

Shrub

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Q193

Which letter comes before G and after E?

A

B

B

C

C

F

D

D

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Q194

Statement Should admission to the professional degrees in Pakistan be given only on merit without any concession to any particular group of students? Arguments (I) Yes. This will improve the quality of the professional institutes and degrees as they will be able to complete the degree successfully. (II) No. This will keep a large number of socially and economically backward students out of the reach of professional institutes and degrees.

- A If argument I is strong
- B If only argument II is strong
- C If both I and II are strong.
- D If neither I nor II is strong

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Q195

I. The people of Kashmir are under curfew for unlimited period. II. The military army has killed more than 500 people in Kashmir.

A

Statement I is the cause and statement II is its effect.

B

Statement II is the cause and statement I is its effect.

C

Both statements I and II are independent causes

D

Both statements I and II are the effects of independent cause.

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Q196

Statements All apples are bananas. No banana is a mango. Some mangoes are oranges. Conclusions (I) All oranges can never be bananas. (II) Some mangoes are apples.

A

Only conclusion (I) follows

B

Only conclusion (II) follows

C

Both conclusions follow

D

Both of them do not follow

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Q197

Statement The availability of imported fruits has increased in the indigenous market and so the demand for indigenous fruits has been decreased. I. To help the indigenous producers of fruits, the Government should impose high import duty on these fruits, even if these are not of good quality. II. The fruit vendors should stop selling imported fruits. So that the demand for indigenous fruits would be increased.

A both of them follows

B None of them follows

C Only I follows

D Only II follows

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Q198

Statement: The farmers have decided against selling their Kharif crops to the government agencies. The government has reduced the procurement price of Kharif crops starting from last month to the next six months.

A

Statement I is the cause and statement II is its effect.

B

Statement II is the cause and statement I is its effect

C

Both the statements I and II are independent causes

D

Both the statements I and II are effects of independent causes

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Q199

If in a certain language, NOIDA is coded as OPJEB, how is DELHI coded in that language?

A

CDKGH

B

EFMIJ

C

FGNJK

D

IHLED

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Q200

Which country has the most news channels?

A

Russia

B

India

C

Australia

D

Brazil

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Q201

The elements having partially filled d and f orbitals are called as _____?

A

Transition elements

B

d-Block elements

C

f-block elements

D

All of these

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Q202

Icosahedral Viruses have how many faces?

A

20

B

30

C

10

D

40

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Q203

The main feature of prokaryotic cell is

A

absence of DNA

B

absence of nucleus

C

absence of cell wall

D

absence of plastids

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Q204

Non-inductive resistances are used in

A

ammeter

B

voltmeter

C

resistance boxes

D

all of these

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Q205

The concept of atoms was given by _____

A

Democritus

B

Berzelius

C

Bohr

D

Dalton

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Q206

A stationary wave is formed in a pipe which is open at one end. If length of pipe is L , then what is the maximum possible wavelength of the wave.?

A L

B $2L$

C $3L$

D $4L$

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Q207

The communication between the two hemispheres is the function of:

A

Corpus callosum

B

Hindbrain

C

cerebellum

D

cerebrum

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Q208

A stationary wave is setup on a string of length 10 cm. Four loops are formed. what is the distance between two consecutive crests?

A 4.5 cm

B 5 cm

C 2.5 cm

D 1.25 cm

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Q209

Apomixis is a form of which of the following?

A

Parthenocarpy

B

Parthenogenesis

C

vernalization

D

all of these

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Q210

Choose the correct sentence.

A

The sun was rising; we had to move.

B

The sun was rising; we had to move?

C

The sun was rising, we had to move.

D

The sun was rising we had to move.

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